# CATALOG SECTION 85

## Electric Switchman®

A85-832
without Heater

GENERAL RAILWAY SIGNAL COMPANY
A UNIT OF GENERAL SIGNAL CORPORATION
ROCHESTER NEW YORK 14602
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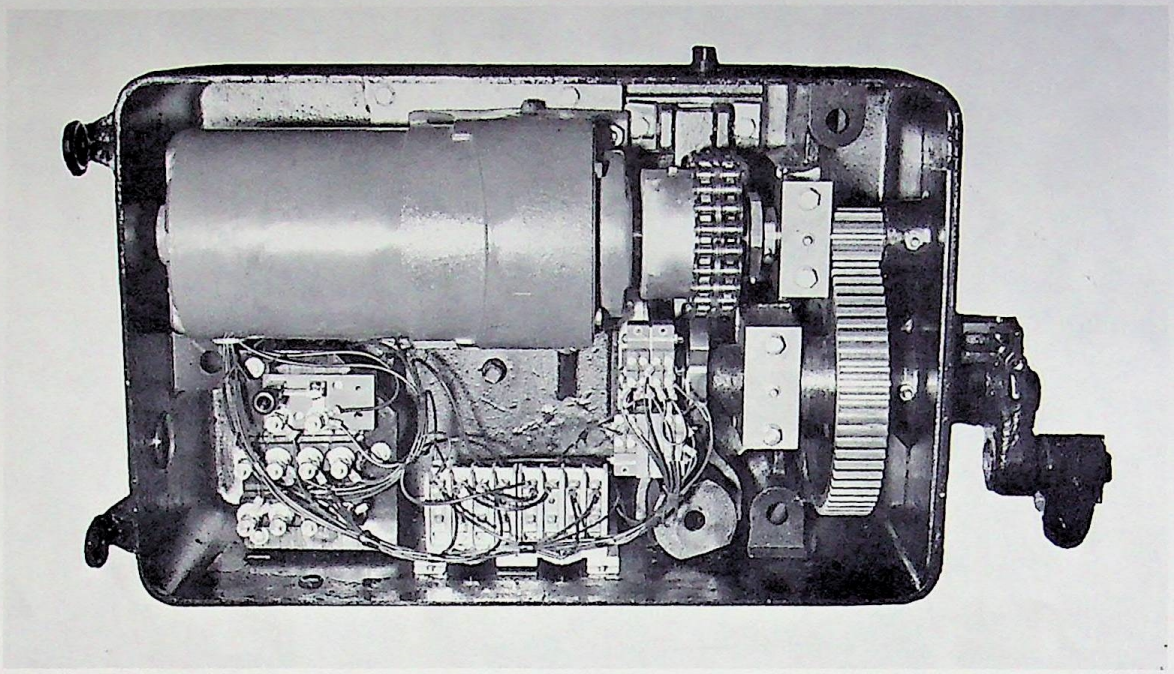


## GENERAL DESCRIPTION

The Electric Switchman is a simplified, compact electric switch machine designed for use in place of hand-throw switch stands in flat yards, receiving and departure yards, and similar noninterlocked service, including operation of derails and blue-flagging devices.

The Switchman uses 115-volt, 60-cycle single phase a.c. for both control and operation. Built-in normal and reverse contactors, which are mechanically interlocked, control the direction of motor operation and provide instant reversibility. The single-phase motor, which draws 7 to 9 amperes, drives a throw-rod operating crank through a gear-head reduction, friction clutch, pinion, and spur gear. The 5 1/2-inch throw-rod stroke takes approximately two seconds. A heavy, spring-loaded detent holds the crank securely at both ends of the stroke. Contacts within the Switchman indicate the machine normal, reverse, and out-of-correspondence.

The Switchman can be hand operated by a hand crank (ratchet handle wrench with hex. socket, Reference E, page 56) placed on the external projection of the pinion shaft.

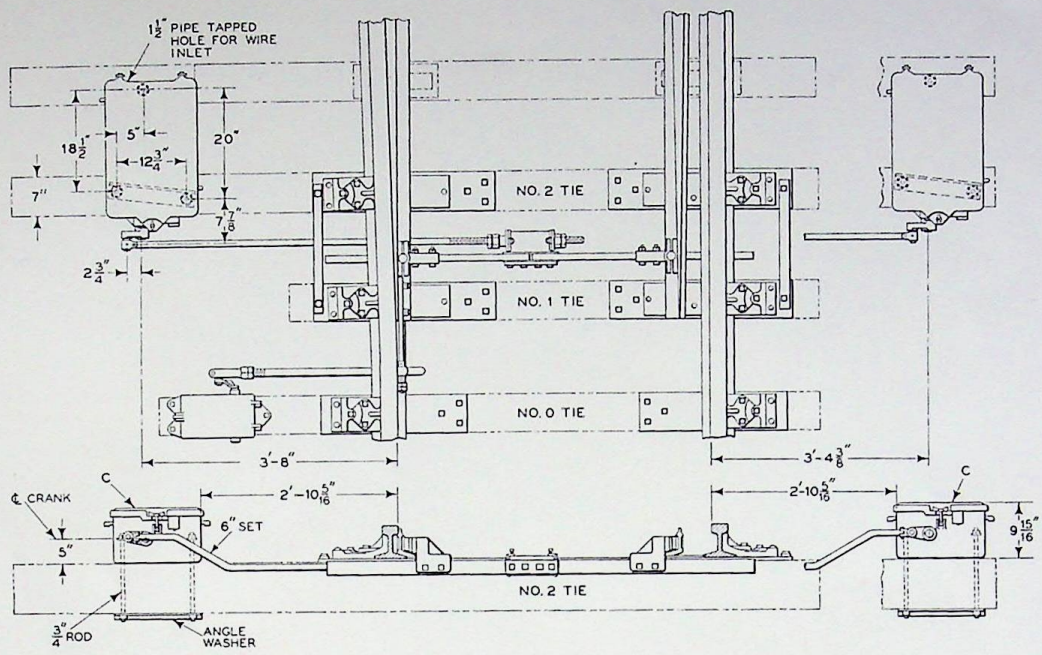
Switch layouts using the Electric Switchman can be supplied in two types, nontrailable (upper layout, page 54) and trailable (lower layout, page 54). The

trailable type uses a short throw rod with an insulated spring bracket, which bolts to the No. 1 rod in place of a switch adjusting bracket. With a trailable switch layout, including a switch circuit controller, the Switchman can be circuited to operate to the trailed position as soon as the switch points are beyond the center of throw.

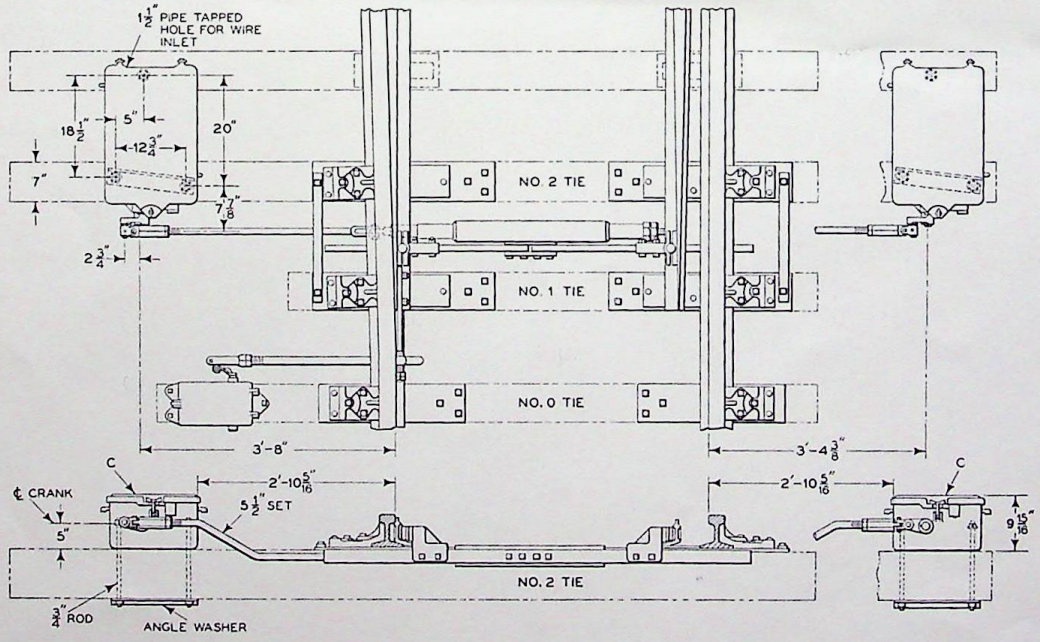
The Switchman mounts directly on two unframed ties in any position; left-hand or right-hand, and on the open or closed point side. It is waterproof to 4-1/4 inches above top of ties. An electric heater (Reference F, page 56) is available.

If a detector track circuit is used, the circuiting of the Switchman can be arranged to prevent switch operation when the track circuit is occupied, but to permit the completion of any stroke started before track circuit occupancy.

A switch circuit controller is used to check switch point position. Then by suitable circuit selection through the circuit controller and contacts of the Electric Switchman, as many as three indications including transit indication may be displayed by a switch signal.




A - Typical layout complete with Electric Switchman (non-trailable).




B - Typical layout complete with Electric Switchman (trailable).

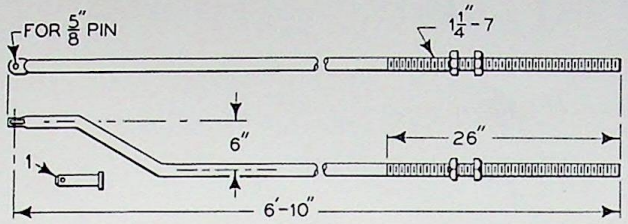
# TYPICAL LAYOUTS For ELECTRIC SWITCHMAN

***Order by catalog number and name shown in bold type***

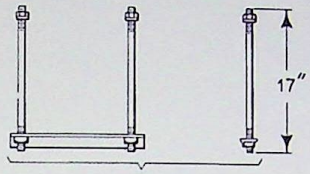
| REF. | NAME | CATALOG NUMBER | |
|---|---|---|---|
| | | With fitting G, pg. 56 for 1 1/2" flex. conduit | With nipple H, pg. 56 for 1 7/8" rubber conduit |
| A | ELECTRIC SWITCHMAN LAYOUT COMPLETE, without heater (Non-trailable) with switch adjustment bracket for connection to a vertical switch rod . . . . . | A85-820 | A85-821 |
| A1 | As above, except with switch adjustment bracket for connection to a horizontal switch rod . . . . . | A85-822 | A85-823 |
| A2 | Same as Ref. A except with heater . . . . . | A85-824 | A85-825 |
| A3 | Same as Ref. A1 except with heater. . . . . | A85-826 | A85-827 |
| | Note: The above layouts include the following:<br>Electric Switchman<br>Throw rod, Ref. A, page 56<br>Hold down kit, Ref. D, page 56<br>Switch Adjustment Bracket, Catalog Section 91, page 7, Refs. D or E | | |
| B | ELECTRIC SWITCHMAN LAYOUT COMPLETE, without heater (Trailable) with spring bracket shown on page 56 Ref. C for connection to a vertical switch rod . . . . . | A85-830 | A85-831 |
| B1 | As above, except with spring bracket shown on page 56, Ref. B for connection to a horizontal switch rod . . . . . | A85-832 | A85-833 |
| B2 | Same as Ref. B except with heater . . . . . | A85-834 | A85-835 |
| B3 | Same as Ref. B1 except with heater. . . . . | A85-836 | A85-837 |
| | Note: The above layouts include the following:<br>Electric Switchman<br>Rod (Spring Bracket), Ref. B, or C, page 56<br>Hold down kit, Ref. D, page 56 | | |

| REF. | NAME | CATALOG NUMBER |
|---|---|---|
| C | ELECTRIC SWITCHMAN, only, without heater, fits all layouts above . . . . . | A85-840 |
| C1 | As above, except with heater . . . . . | A85-841 |

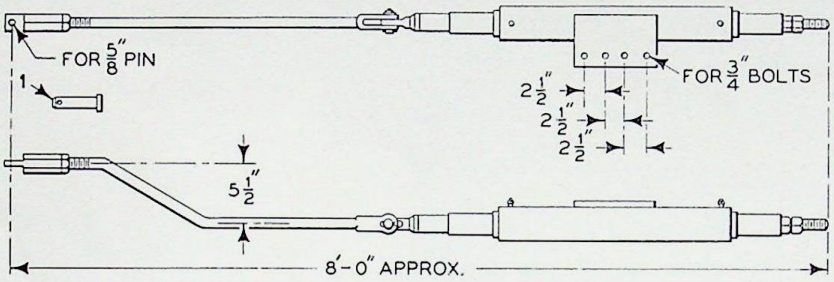
For accessories not included above, see page 56.



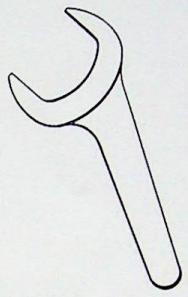

A-THROW ROD



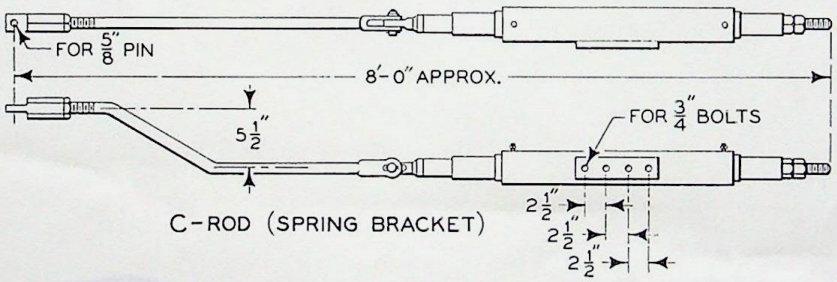

D-HOLD-DOWN KIT



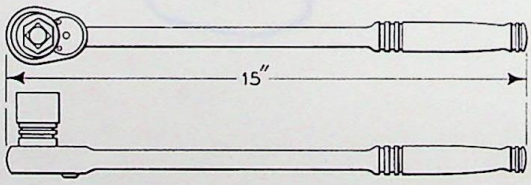

B-ROD (SPRING BRACKET)



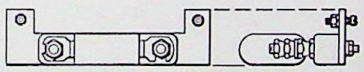
M-WRENCH



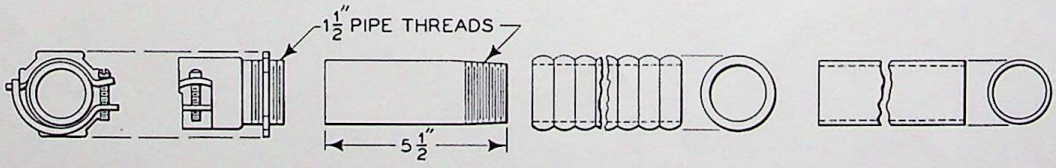

C-ROD (SPRING BRACKET)




E-HAND CRANK



F-HEATER




G-COUPLING H-PIPE NIPPLE J-CONDUIT K-CONDUIT

NOTE: References A, or (B or C), G (or H), D and 1 are included when you order "ELECTRIC SWITCHMAN LAYOUTS COMPLETE" as listed on page 55.

Accessories for Electric Switchman.

# ACCESSORIES For ELECTRIC SWITCHMAN

***Order by catalog number and name shown in bold type***

| REF. | NAME | CATALOG NUMBER |
|---|---|---|
| A | THROW ROD, with two lock nuts . . . . . | A85-850 |
| B | ROD (SPRING BRACKET) for mounting to horizontal #1 rod. . . . . | A85-862 |
| C | ROD (SPRING BRACKET) for mounting to vertical #1 rod. . . . . | A85-861 |
| D | HOLD-DOWN KIT, for 7", 8" or 9" ties, consists of 3 threaded rods 3/4" x 17", complete with all necessary angle and lock washers and nuts. . . . . | A85-855 |
| *E | HAND CRANK, consists of 15" ratchet handle wrench with 1/2" square drive and 1-1/2" long, 7/8" hex. socket . . . . . | A85-860 |
| F | HEATER, 20 watts, 110 volts, with mounting plate . . . . . | A85-865 |
| G | COUPLING, 1-1/2" pipe thread for 1-1/2" flexible conduit . . . . . | A85-866 |
| H | PIPE NIPPLE, 1-1/2" pipe thread for 1-7/8" I. D. rubber conduit . | A85-867 |
| J | CONDUIT, 1-7/8" I. D., solid rubber, length 3' . . . . . | A85-520 |
| K | CONDUIT, 1-1/2" flexible, length 3' . . . . . | A85-868 |
| M | WRENCH, for adjusting clutch . . . . . | P85-974 |
| 1 | PIN, for use with throw rods, Refs. A, B, and C . . . . . | P85-939 |

*Commercial item.

Memoranda